#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



N/A

Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 1.28

# WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter **Report No:** WIR-022024

Address: 333 Burma Road **Date Inspected:** 16-Mar-2011

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1730 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: American Bridge/Fluor Enterprises, a JV **Location:** Job Site

**CWI Name:** Fred Von Hoff **CWI Present:** Yes No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No

N/A **Electrode to specification:** Yes No **Weld Procedures Followed:** Yes No N/A **Qualified Welders:** Yes No N/A **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No

Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** Tower Grillage

#### **Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager was on site between the times noted above.

This QA Inspector observed ABF welding personnel Todd Jackson (#4639) monitoring the preheating equipment and verifying the temperature setting with an electronic temperature gauge.

South Tower leg:

Pending repairs and further Ultrasonic Testing (UT) by QC personnel.

East Tower leg:

This QA Inspector randomly observed QC Inspector Fred Von Hoff mark various welds for grinding. This QA Inspector randomly observed ABF welding personnel Jason Collins (#8128) performing the grinding. By the end of the shift this date QC Inspector Fred Von Hoff stated he had not completed the final visual and Magnetic Particle Testing (MT) of the welds.

West Tower leg:

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This QA Inspector randomly observed ABF welding personnel Sal Sandoval (#2202) performing SMAW on various CJP welds providing the remaining fill and cover passes. This QA Inspector observed the first eight of ten welds had been completed as indicated on the weld on the sequence map.

### North Tower leg:

This QA Inspector randomly observed ABF welding personnel Rick Clayborne (#2773) and Gilbert Peralta (#9453) performing SMAW of Partial Joint Penetration (PJP) welds. By the end of the shift this date this QA Inspector observed welding on Face-A, B and E appeared to have been completed.

### South Suspender Bracket:

This QA Inspector observed welding had been completed and was informed by QC Inspector Fred Von Hoff that he was waiting for the 48 hour period after welding to perform his final inspections. See photo below.

## North Suspender Bracket:

This QA Inspector observed ABF welding personnel Richard Garcia (#5892) fitting up and welding the top bearing plates at this location. This QA Inspector randomly observed as QC Inspector Fred Von Hoff monitored the welding at this location. This QA Inspector observed upon the completion of welding the fillet welds appeared to have been held back from the edge of the stiffener plate approximately the same distance as the fillets on the South Bracket.

This QA Inspector was informed by QC Inspector Fred Von Hoff the welding parameters for the personnel noted above were within the required heat input range in the Welding Procedure Specifications (WPS) ABF-WPS-D15-1162-4 for the PJP welds, ABF-WPS-D15-1042A-4 for CJP welds and ABF-WPS-D15-F1206 for Fillet welds. Note the welding parameters are the same for all three procedures. This QA Inspector randomly observed the amperages and voltages of ABF welding personnel noted above and they appeared to be within the ranges in the WPS. This QA Inspector observed that both 3.2 mm and 4.0 mm diameter E9018H4R electrodes were being used and stored in separate heated storage containers. This QA Inspector also observed the 1-hour exposure limit for the electrodes appeared to be monitored and adhered to.

This QA Inspector had previously received Weekly Welding Report submittal; ABF-Sub-001536 Rev-46. This QA Inspector performed a review of the documents to determine compliance with the Welding Quality Control Plan (WQCP) submitted by the contractor, compliance with the applicable contract requirements and to determine if any Quality Control (QC) documents were missing. This QA Inspector documented the findings on a weld specific tracking log and informed QA Inspector Bill Levell of the findings. This QA Inspector placed the reviewed documents in the applicable files.

### **Summary of Conversations:**

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above there were no notable conversations.

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#### **Comments**

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager, Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer